

Draft Floodplain Recommendations for Built Environment

WORK-IN-PROGRESS February 14, 2003

The draft/work-in-progress floodplain standard recommendations for the Built Environment below were developed following polling and discussion amongst the floodplain task force members at their January 21, 2003 meeting. Based upon the discussion at that meeting, the draft recommendations generally reflect the recommendations for New Growth Areas, with the exception of Item 9, which relates to Salt Creek Flood Storage Areas. Underlined text reflects refinements to Items 1-8 and Item 13 that were made for consistency, based upon comments at the February 4, 2003 meeting on New Growth Areas, as well as the addition of text to Item 9 as described above.

1. No Adverse Impact. In new growth areas, the City of Lincoln and Lancaster County should have a policy of No Adverse Impact, with a goal of ensuring that the action of one property owner does not adversely impact the flooding risk for other properties, as measured by increased flood stages, flood velocity, flows, or the increased potential for erosion and sedimentation.
2. No Net Rise/Compensatory Storage Standard. A No Net Rise and Compensatory Storage standard should be adopted. This means that development within the 100-year floodplain in new growth areas should be required to demonstrate through an engineering study that it will cause no increase in the water surface elevation of the 100-year flood. In addition, compensatory storage should be required at a ratio of 1.5 to 1 for volume of flood storage lost to fill or structures in the 100-year floodplain (*See Appendix A for additional information; also, see Item 11 for discussion of this standard as it relates to substantial improvements*).

allowable rise between 0'-1' in the flood fringe, and/or purchase of property or easements where flood heights will increase and an amendment is made to the FEMA flood insurance rate map. *(See Appendix B for additional information).*

4. Stream Buffers. The Minimum Flood Corridor stream buffer or similar standard should be applied in the City and County within the FEMA-mapped floodplains and along smaller, unmapped streams that have a defined bed and bank. Encroachments should be permitted per the existing standards for Minimum Flood Corridors for operation, maintenance and repair, channel stabilization, stormwater storage facilities, utility crossings, public parks, pedestrian/bike trails and other recreational uses and public purposes. However, proposed encroachments should be required to demonstrate a sequencing approach that seeks first to avoid, then to minimize, then mitigate for any encroachments. Mitigation for loss of vegetation and flood storage should occur at a 2 to 1 ratio. Where land uses prior to development have impacted the buffer width, the area should be replanted with vegetation compatible with the corridor and water quality benefits.
5. Surplus/Vacated Floodplain Property Policy.
The City and County should adopt a policy where, under normal circumstances, City or County property in the floodplain is not proposed for surplus. If there are unusual circumstances that cause the consideration of surplus property in the floodplain, the City or County should retain a permanent conservation easement that protects the flood storage capacity, or any flood storage impacts should be mitigated at a 2 to 1 ratio. Surplus property should not be considered under any circumstances where floodplains contain environmental resources such as riparian areas or stream corridors that provide habitat and water infiltration benefits or serve as connectors to natural areas.

When street or alley ROW in the floodplain is proposed for vacation, the City or County should retain a permanent conservation easement that protects the flood storage capacity. Consideration should be given to allowing for a conservation easement to be deeded over an alternate floodplain area having equal flood storage volume where appropriate.

6. Floodplain Buyout Program. The City and County should develop and implement a continuous floodplain buyout program with criteria that include minimizing impacts to neighborhoods and historic districts and developing contiguous open space. Eminent domain should only be used to acquire property as a last resort.
7. Floodplain Development Fee. ~~At this time, it is not appropriate for the City or County should consider charging to charge a floodplain development fee. Consideration of a floodplain development fee would require~~ However, further evaluation ~~needs to be completed~~ regarding alternative fee structures and criteria for applying the fees in a logical and equitable manner ~~before a decision is made regarding the advancement of this concept.~~ If a fee is established at some time in the future, however, consideration should be given to dedicating the revenue ~~should be dedicated~~ to advance the flood mapping program and to assist in the funding of floodplain buyouts.
8. Best Management Practices. 'Best Management Practices' such as grassed swales, water quality wetlands, retention cells, etc. are recommended and should be *encouraged* in floodplain areas. Best Management Practices are identified in the City of Lincoln Drainage Criteria Manual and can offset impacts to the natural and beneficial functions of floodplains when they are developed. *(See Appendix C for additional information).*
9. Salt Creek Flood Storage Areas.

comprehensive flood mapping study can be completed for this reach of Salt Creek to provide better information as a basis for a new standard.

10. Building Construction Standards. Buildings in new growth areas should be protected to an elevation 1.5 feet above the 100-year flood elevation.
11. Substantial Improvement Threshold. Where there are existing residential, commercial, or industrial structures within the floodplain, the substantial improvement threshold should continue to be implemented the same way that it is today (which reflects the minimum federal requirements). That is, when an improvement is made to a structure that is equal to or greater than 50% of its value, the entire structure must be brought into compliance with the floodplain regulations. Each separate improvement is considered individually relative to the 50% threshold.

In lieu of a new policy to cumulatively track substantial improvements, the City should implement a standard requiring *all* lateral additions to non-residential structures to be elevated or protected to 1.5' above the base flood elevation. Residential structures should be exempt from this requirement. (All structures will still have to meet the current 50% improvement/damage threshold to remain in compliance with minimum NFIP requirements).

To be consistent, the No Net Rise/Compensatory Storage standard should also be met when a substantial improvement ($\geq 50\%$ of the value) is made to a structure, or when a lateral addition is made to a non-residential structure.

11. Cluster Development. Additional incentives should be adopted for clustering development outside the floodplain by broadening the current language in the zoning ordinance

12. Best Available Study Information.

- a. 100- year floodplain boundary and flood elevation information (existing conditions) developed for watershed master plans should be utilized as the 'best available information' for the purposes of administering the Floodplain Ordinance relative to requirements for proposed subdivisions and building permits.
- b. The stormwater standards should continue to apply to floodprone areas, or "100-year storm limits" that are required to be shown with new subdivision proposals along smaller tributaries. Floodplain standards should not be applied to these areas unless they are shown on the FEMA floodplain maps or have been identified through a watershed master plan. *(See Appendix D for additional information).*
- c. Consideration should be given to regulating based upon a "future conditions" floodplain when the information is available through watershed master planning. However, this topic needs further evaluation and discussion. The benefits of this approach need to be assessed relative to the benefits already provided by: 1) the protection of flood storage and conveyance following the adoption of new standards for floodplain areas, 2) the detention/retention standards already in place to address stormwater runoff throughout the basin, 3) watershed master planning and implementation addressing the timing of stormwater flow throughout the basin. The implementation of these three elements may prevent significant increases in flood boundaries in the future.

13. Floodplain Mapping

The City and County should continue to develop and improve a comprehensive, watershed approach to floodplain mapping which recognizes

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